20426
S/109/60/005/012/024/035
E192/E582

9.4130 (3201, 2804, 1137, 2801)

AUTHORS: Leyteyzen, L G., Glukhovskoy, B.M. and Tarasova, Ye. I.

TITLE: Simultaneous Activation of Various Photocathodes and Emitters in Photo-electron Multipliers

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.12, pp. 2038-2045

TEXT: A large number of photo-electron multipliers was analysed and the characteristics of their photocathodes were investigated. The photomultipliers were of the standard industrial or laboratory type. First the spectral characteristics of a number of multistage photo-electron multipliers with bismuth-silver-cesium cathodes and antimony-cesium emitters, as well as Al-Mg alloy emitters were investigated experimentally. Some of these are shown in Fig.1, where the wavelength is shown on the abscissa in microns. Some spectral characteristics of the multipliers with oxide-silver-cesium cathodes were also investigated and the results are given graphically. It is concluded that the shape of the characteristics of the tubes with antimony-cesium emitters is due to the strong adsorption of cesium by the emissive layer so that a film of free cesium is formed on the cathode which lowers its work function.

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S/109/60/005/012/024/035
E192/E582

Simultaneous Activation of Various Photocathodes and Emitters in Photo-electron Multipliers

The secondary emission coefficient of the photomultipliers was investigated at a fixed voltage and it was found that it varied considerably from sample to sample, depending on its processing conditions. The average efficiency characteristics of the secondary-emission surfaces were also investigated. The efficiency coefficient is defined as the average gain of the multiplier per stage; this was obtained by measuring a large number of samples and determining the voltage and sensitivity distribution for the cathodes (I.Ya.Breydo et al., Ref.1). In general, the distribution curves have the form of the normal Gaussian distribution. The average gain coefficients per stage for a number of standard multipliers produced in 1959 with various emitters were investigated by the above method and the results are given in a figure, while the details of the multipliers are shown in a table. The same figure shows also the gain of some of the American tubes (made by RCA). From the experimental data given in the figures it is seen that for the same interstage voltages the gain of the multipliers with antimony-cesium emitters is much higher than that of the tubes with

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alloy-type emitters; the highest gain is obtained in the multipliers with a lateral optical input. The efficiency of various multiplier systems is approximately identical but the coefficient of the secondary emission as a function of voltage differs considerably. The effect of the presence of alkali metals on the secondary emission coefficient of alloy-type emitters was also investigated. According to N. Schaetti (Ref.3), M. Biermann and W. Krüger (Ref.4) and Ye. G. Kormakova and V. G. Pavlovskaya (Ref.5) the presence of cesium leads to an increase in the secondary emission coefficient σ. This effect was investigated for the Al-Mg emitters for the multipliers provided with a heated cathode. The overall gain of the multipliers was measured during various processing stages and the average gain was then calculated. The results of these measurements are given in Figs. 4 and 5. These show the gain per stage as a function of the interstage voltage. curves 1 and 2 in Fig.4 illustrate the effect of thermal activation, curves 1' and 2' represent the processing with K-Na while curves 1" and 2" illustrate the influence of Cs processing. Curves 1 2 and 3 in Fig.5 show

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S/109/60/005/012/024/035
E192/E582

Simultaneous Activation of Various Photocathodes and Emitters in Photo-electron Multipliers

the gain after the thermal activation, while curves 1', 2' and 3' illustrate the effect of Cs processing; in both figures the same emitters made of Al-Mg alloy were used. The dark current of the multipliers, which determines their sensitivity, was also investigated. It was found that the spread of this parameter, at a given sensitivity, in the standard commercial tubes was very considerable (several orders) and was much higher than the spread of other parameters. It was found that oxide-cesium cathodes give a constant thermal component of the dark current, which does not increase when the cathode is illuminated. On the other hand, an Sb-Cs cathode, operating with antimony-cesium emitters, has a very low thermal current. The multipliers with various other types of cathodes and with Al-Mg emitters give almost identical results as regards the thermal current. It is thought that the reason for the comparatively high dark currents in the multipliers with Sb-Cs cathodes and alloy-type emitters, as compared with other cathodes and emitters, is the luminescence of the alloy-type emitters.

S/109/60/005/012/024/035
E192/E582

Simultaneous Activation of Various Photocathodes and Emitters in Photo-electron Multipliers

There are 7 figures, 2 tables and 7 references: 3 Soviet and 4 non-Soviet.

SUBMITTED: December 21, 1959

Fig.1

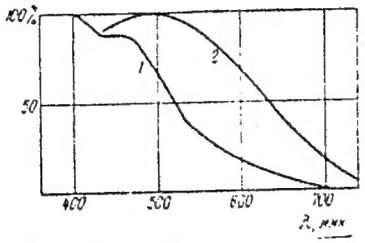

Рис. 1. Спектральные характеристики висмуто-серебряно-цезиевых катодов:
1 — с Sb — Cs-эмиттерами; 2 — с Al — Mg-эмиттерами

Card 5/6

AUTHORS:

TITLE: Properties of the [illegible] photocathodes

PERIODICAL: [illegible]

TEXT: Some properties of the monocrystalline photocathodes of type [illegible]-36 (Sb-Cs) and [illegible]-51 (Sb-Na-K-Cs) with semi-transparent Sb-Na-K-Cs- photocathodes are described. The authors characterize the development stage of these multipliers in 1961 and series production is now being planned. The FEU-51 multiplier for light measurements and a cathode of 25 mm diameter and 11 multiplying cascades. The basket-shaped emitters were produced from the activated [illegible]-2 (Sb-Cs) alloy and activated before the multiplying system was mounted. The alkaline metals were prepared by heating tablets of the chromates of K, Na, Cs and of well purified pyrodenized titanium (reducing agent). The logarithms of the sensitivities and the dark current increase almost linearly with the voltage. For FEU-36 this increase is steeper than for FEU-51. FEU-36 and FEU-51 are sensitive

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Properti[illegible] of [illegible] photoelectronic... [illegible]/02
[illegible]

in the range [illegible] with a maximum at [illegible]. According to measurements by A. [illegible] of the Institut [illegible] (Institute of Radiation and Physicochemical Biology AS USSR) the [illegible] ratio between [illegible] and [illegible] multiplier is ten times higher, and that of the poorest is [illegible] times higher than the ratio in the reference sample multipliers [illegible], and -22. The best [illegible] multipliers have anode sensitivities of [illegible] a lm[-1] and [illegible] sensitivity [illegible] lumen. [illegible] modulated [illegible] the light threshold of the [illegible] multipliers is more than twice as good as that of [illegible]. After a [illegible]-hour operation the instability of most of the multipliers remains below [illegible]. The [illegible] of the new multipliers remain the same even after operation [illegible] hours. The emitters, in particular, show no fatigue. [illegible] crystals in connection with [illegible] give a light yield more than twice that of [illegible] multipliers with antimony-cesium photocathodes. A [illegible] was achieved with [illegible] CsI (Tl) crystals. There are [illegible] table.

Card 2/2

L 25071-65 EWT(l)/EWT(m)/EPA(w)-2/EEC(b)-2/EWA(m)-2/EWA(h) Pab-10/Pt-10/
Peb IJP(c)

ACCESSION NR: AR4045741 S/0275/64/000/007/A034/A034

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Svodny*y tom, Abs. 7A190

AUTHOR: Leyteyzen, L. G.; Glukhovskoy, B. M.; Berkovskiy, A. D.

TITLE: Characteristics of new types of multistage multiplier phototubes intended for scintillation spectrometers

CITED SOURCE: Sb. Stsintillyatory* i stsintillyats. materialy*. Khar'kov, Khar'kovsk. un-t, 1963, 217-220

TOPIC TAGS: multiplier phototube / FEU-28, FEU-32, FEU-37, FEU-38, FEU-39, FEU-51 photomultipliers

TRANSLATION: Fundamental parameters and characteristics are presented of these industrial multiplier phototubes developed in 1960 and covering the 170— 1,200-nm wavelength band: FEU-28, FEU-32, FEU-37, FEU-38, FEU-39, and FEU-51. Bibliography: 1 title.

SUB CODE: EC ENCL: 00

Card 1/1

LEYTEYZEN, L.G.; GLUKHOVSKOY, B.M.

Parameters of new designs of commercial type photomultipliers.
Izv. AN SSSR. Ser. fiz. 28 no.1:115-117 Ja '64. (MIRA 17:1)

L 14373-65 EWT(l)/EWG(k)/EEC(t)/EEC(b)-2/EWA(h) Pn-5/Pu-4 LJP(c)/
AFWL(t)/RAEM(a)/ESD(gs)/ESD(t) AT

ACCESSION NR: AP4045298 S/0048/64/028/009/1450/1453

AUTHOR: Leyteyzen, L. G.; Glukhovskoy, B. N.; Ephtein, K. I. 67

TITLE: Investigation of the sensitivity thresholds of photomultipliers with different photocathodes for various spectral regions [Report, Tenth Conference on Cathode Electronics held in Kiev from 11 to 18 Nov 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 9, 1964, 1450-1453

TOPIC TAGS: photomultiplier tube, photomultiplier characteristic, photocathode

ABSTRACT: For a number of applications of photomultipliers it is essential to know the spectral sensitivity threshold and peak sensitivity region of the tubes. Accordingly, the absolute values of the sensitivity threshold wavelengths of photomultipliers with Sb-Cs, Ag-O-Cs, Bi-Ag-O-Cs, Sb-K-Na-Cs and Sb-K-Na photocathodes, which represent the five basic types of photocathodes, were determined. The measurements were carried out on a special setup for this purpose,

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L 14373-65
ACCESSION NR: AP4045298

using interference light filters, for each of which the exact transmission curve was first obtained. The measurement results are presented in the form of curves characterizing the variation of the spectral sensitivity threshold with wavelength and the absolute spectral sensitivity with wavelength for each type of photocathode. The regions of peak spectral sensitivity do not coincide with the regions of optimum sensitivity. The characteristics of Ag-O-Cs photocathodes are distinctive. The test data should be helpful in selecting photo-multipliers for specific applications. Orig. art. has: 1 formula and 3 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: EC NO REF SOV: 000 OTHER: 000

Card 2/2

KLYACHKO, A.L., inzh.; OLIKOV, L.I., inzh.; GLUKHOVSKIY, R.A., kand. tekhn. nauk, inzh., red.; GUSEV, A.A., doktor tekhn. nauk, prof., red.; GRISHIN, B.V., kand. tekhn. nauk, red.; KOSTYUKOVSKIY, K.G., kand. tekhn. nauk, red.; KRYLOV, N.A. doktor tekhn. nauk, red.; KUREK, N.N., kand. tekhn. nauk, red.; LEVINSKIY, L.G., inzh., red.; LOBACHEV, N.D., inzh., red.; MOROZOV, A.I., inzh., red.; ONIASHVILI, O.I., doktor tekhn. nauk, prof., red.; SARKISOVIY, K.V., doktor tekhn. nauk, prof., red.; SILIN, A.F., doktor tekhn. nauk, prof., red.; YEMELOV, A.A., inzh., nauchn. red.

Three-dimensional structural elements in the U.S.S.R.; materials of the All-Union Conference on Precast Reinforced Concrete Three-Dimensional Elements held in November 13-17, 1962 in Leningrad [Prostranstvennye konstruktsii v SSSR; po materialam pervogo Vsesoiuznogo soveshchaniia po sbornym zhelezobetonnym prostranstvennym zdaniiam, sostoiavshegosia 13-17 noiabria 1962 g. v Leningrade. Leningrad, Gos. izdat. lit-ry, 1963. 401 p. (MIRA 17:11)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy industrii SSSR. Leningradskoye otdeleniye.

GLUKHOVSKOY, K.A., inzh.; KHONKOD, A.A., inzh.; EMDIN, N.A., inzh.

Using rammed concrete piles in making foundations for light buildings and structures. Biul. tekhn.inform. 4 no.9:10-13 S '58. (MIRA 11:10)

(Foundations)

GLUKHOVSKOY, K.A., inzh.; AVRUTIN, M.L., inzh.

In the drive for progressive technology and high quality of building.
Biul.tekh.inform. 4 no.10:9-12 O '58. (MIRA 11:11)
(Leningrad--Apartment houses)
(Leningrad--Precast concrete construction)

GLUKHOVSKOY, K.

Our successes. Stroitel' no.12:3-5 D '58. (MIRA 12:1)

1. Upravlyayushchiy Leningradskim stroitel'nym trestom No.20.
(Leningrad--Apartment houses) (Precast concrete construction)

DAVID[illegible], M., doktor tech. nauk, prof.; [illegible], [illegible]

[illegible]

[illegible]

([illegible])

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000515420009-5"

AVRYUTIN, M.L., inzh.; GLUKHOVSKOY, K.A., inzh.; KRONROD, A.K., inzh.

Experimental large-panel lightweight concrete houses. Biul. tekh.inform. 5 no.2:3-7 F '59. (MIRA 12:4)
(Leningrad--Apartment houses) (Lightweight concrete)

GLUKHOVSKOY, K., inzh.; KRYLOV, N., kand.tekhn.nauk, MALYSHEV, V., inzh.

Acoustical and radiometric methods of inspecting the quality of building materials and structural elements. Na stroi. Ros. no.11:16-18 N '61. (MIRA 15:2)

(Building materials--Testing)

S/081/62/000/006/062/117
B149/B108

AUTHORS: Krylov, N. A., Glukhovskoy, K. A.

TITLE: Methods of non-destructive testing of concrete

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 437, abstract 6K429 (Beton i zhelezobeton, no. 7, 1961, 319 - 323)

TEXT: Some theoretical aspects are given, as well as the results of experiments on the joint application of the electronacoustic and radiometrical methods of non-destructive concrete testing. The processes of interaction of various impulses with inertia, elastic, plastic, and structural elements of a wave-guide were checked experimentally by electrical simulation. Three empirical methods of determining the strength of materials and structural elements, viz. the standard, static, and comparative methods are described as well as the results of practical application of these methods. It is noted that the electron-acoustic and radiometrical methods of non-destructive testing can be successfully used in solving problems connected with the automation of fundamental technical processes in the works producing reinforced concrete elements. The essential schemes of

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S/081/62/000/006/062/117
B149/B108

Methods of non-destructive ...

automation are given for preparation of concrete mixtures with a constant water-to-cement ratio, compaction of concrete mixtures, prestressing of reinforcement, and treatment of materials in autoclaves. [Abstracter's note: Complete translation.]

Card 2/2

GLUKHOVSKOY, K.A.; EMDIN, N.A.

New thin-walled three-dimensional reinforced concrete elements in Leningrad. Bet. i zhel.-bet. no.10:436-441 O '61. (MIRA 14:12)

1. Zamestitel' nachal'nika Glavleningradstroya (for Glukhovskoy).
2. Nachal'nik uchastka stroitel'stva obolochek Glavleningradstroya (for Emdin).

(Leningrad--Roofs, Shell)

GLUKHOVSKOY, K.A.; KRYLOV, N.A.; KHONKD, A.A., inzh., nauchn. red.; MARKUS, B.M., red.; KUZ'MINA, N.V., tekhn. red.

[Nondestructive methods of testing materials] Nerazrushaiushchie metody ispytaniia materialov; materialy k Vserossiiskomu soveshchaniiu po prostranstvennym konstruktsiiam. Leningrad, Izd. ot-la tekhn.informatsii testa "Leningradorgstroi," 1962. 71 p. (MIRA 16:8)

1. Leningrad. Upravleniye po zhilishchnomu i grazhdanskomu stroitel'stvu.
(Nondestructive testing)

GLUCHOVSKOJ, K.A. [Glukhovskoy, K.A.], inz.

Prefabricated reinforced concrete roof structures for one-story industrial halls in the Soviet Union. Poz stavby 10 no.12:631-634 D '62.

1. Namestek reditele Leningradostroje, Leningrad.

GLUKHOVSKOY, K.A., inzh.

Wider introduction of three-dimensional structures into industrial construction. Bet. i zhel.-bet. 9 no.11:481-485 N '63. (MIRA 17:1)

1. Nachal'nik Glavnapstroya.

GLUKHOVSKOY K.A., inzh.

Mechanization of the construction of pile foundations for residential buildings in Leningrad. Mekh. stroi. 20 no.6:4-6 Je '63.
(MIRA 16:5)

(Leningrad--Piling (Civil engineering)) (Leningrad--Foundations)

GLUKHOVSKOY, K.A.

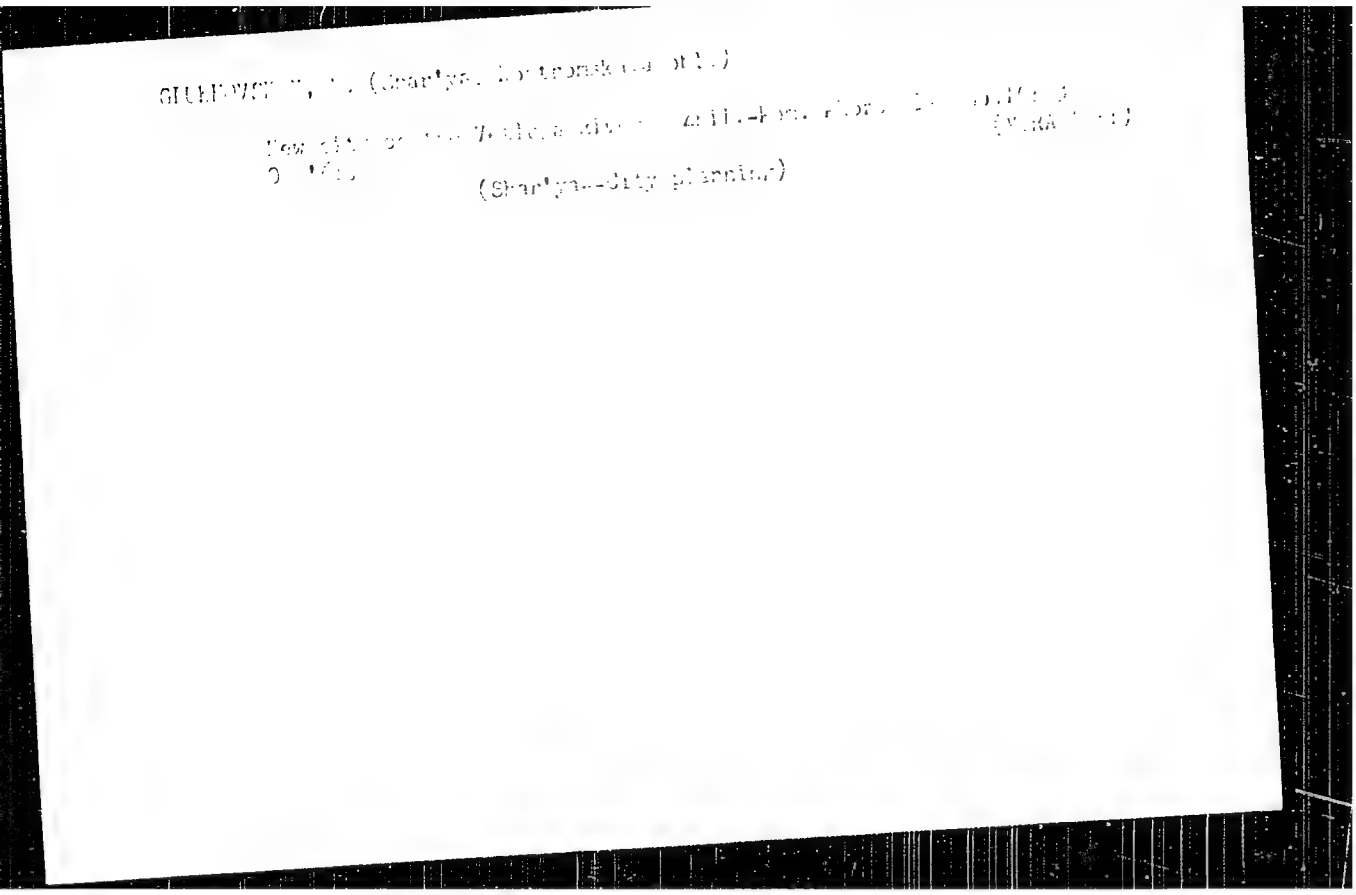
High-speed methods in the building of the "Frasers" [concrete]
Prom. stroi. 42 no.12:10-12 D '64. (MIRA 18:2)

1. Nachal'nik Glavzapstroya Ministerstva stroitel'stva RSFSR.

GLUKHOVSKOY, K.; EMDIN, N., inzh. [deceased]

The contributions of reinforced concrete shells to completely precast industrial consturction. Na stroi.Ros. 3 no.9:15-17 S '62. (MIRA 15:12)

1. Zamestitel' nachal'nika Glavnogo Leningradskogo upravleniya po zhilishchnomu i grazhdanskomu stroitel'stvu (for Glukhovskoy).
(Roofs, Shell) (Industrial buildings)



GLUKHOVSKOY, P.

Problems in work on state revenue. Fin.SSSR 16 no.12:36-38 D '55. (MLRA 9:2)

1.Zamestitel' Ministra finansov USSR.
(Ukraine--Revenue)

L 14456-65 EWT(m)/EWP(j)/T Pc-4 SSD/AFWL/ASD(m)-3/AS(mp)-2/AFETR/RAEM(1)/
ACCESSION NR: AP4047673 ESD(gs/ESD(t) RM S/0303/64/000/005/0008/0009

AUTHOR: Yukel'son, I. I., Glukhovskoy, V. S. 11 B

TITLE: Chemically stable coatings based on polyarylene alkyls

SOURCE: Lakokrasochny*ye materialy* i ikh primeneniye, no. 5, 1964, 8-9

TOPIC TAGS: polyarylene alkyl, lacquer, cross-linked polymer, sulfurated polymer, thermosetting polymer, paramagnetic resonance, infrared absorption spectrum

ABSTRACT: The author investigated the reaction products of polyarylene alkyls with sulfur, forming thermosetting materials. Polyethyl-phenylene-ethyl (d = 1.0006, average mol. weight = 1200) was used as a carbon-chain saturated polymer of the fatty aromatic series and sulfur was the cross-linking agent. The mechanism of cross-linking of polyethyl-phenylene-ethyl by sulfur is discussed and interpreted by chemical equations. Paramagnetic resonance analysis and infrared absorption spectra of the cross-linked product showed that during the reaction the macromolecule increases in size and bonds are formed between the chains. The sulfur bridges and C-C bonds are formed preferably between the alkyl parts of the macromolecules. The resulting cross-linked polyethyl-

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L 14456-65
ACCESSION NR: AP4047673

phenylene-ethyl is a thermosetting product. The specific viscosity of the initial polymer was 0.0680, that of the cross-linked polymer increased to 0.3614, and the amount of bound sulfur was 5.2%. The lacquer obtained from this polymer contained 100 g of cross-linked polyethyl-phenylene-ethyl, 15 g of plasticizer (dibutyl phthalate) and 240 g of solvent (xylene). It was found that the coating based on this polymer has a high resistance to acids, alkalies, atmospheric oxygen and heat at temperatures above 250C. Samples coated with this lacquer kept for 2 months in concentrated HCl and HNO_3, 50% H_2SO_4 and alkali. After drying at 120C for 1 hour, then at 210C for 20 minutes, the films had an attractive gloss, and good strength, elasticity and dielectric properties. Orig. art. has: 15 chemical formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 003 OTHER: 000

Card 2/2

L 54961-65 EWT(m)/EPR(c)/EWP(j)/T Pc-4/Pr-4 RM
ACCESSION NR: AP5014165 UR/0080/65/038/005/1165/1167 17 16 B
541.6'65

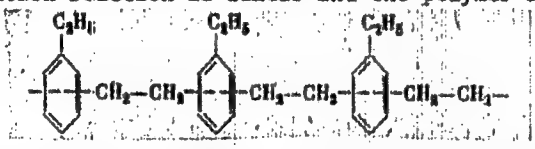
AUTHOR: Yukel'son, I. I.; Kozyreva, Ye. F.; Garmonov, V. I.; Slukhovskoy, V. S.

TITLE: Synthesis and optical properties of polyethylphenylenethyl 7

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 5, 1965, 1165-1167

TOPIC TAGS: polycondensation, dichloroethane, polyethylene, polyethylphenylenethyl

ABSTRACT: Polyethylphenylenethyl was prepared by polycondensation of 1,2-dichloroethane with ethylbenzene under conditions typical for Friedel-Crafts reactions. At constant conditions an increase in the catalyst ($AlCl_3$) concentration up to a certain level is reflected in an increased molecular weight of the product polymer. The average molecular weight of the polymer increases also with a decrease of the molar ratio of ethylbenzene to dichloroethane. In the case of excess of ethylbenzene the polycondensation reaction is linear and the polymer structure is



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L 54961-65
ACCESSION NR: AP5014165

Maximum of the average molecular weight of the polymer results from equimolar ratio of ethylbenzene to dichloroethane. The ethyl group in the ethylbenzene hinders extensive cross-linking within the polymer. At molar ratios of ethylbenzene to dichloroethane from 1:1 to 0.7:1 the polymer is highly cross-linked, rubber-like, and insoluble in hydrocarbons, alcohols, ketones, and chloroorganic solvents. The photoelectric spectra of polyethylphenylenethyl are typical for branched polymers. The oscillatory character of the maxima of bands for the $n \rightarrow \pi$ electron transition is explained in terms of the large number of methyl and ethyl groups in polyethylphenylenethyl. Orig. art. has: 2 tables, 3 figures, and 3 formulas.

ASSOCIATION: Voronezhskiy tekhnologicheskiy institut (Voronezh Institute of Technology)

SUBMITTED: 20Jun63 ENCL: 00 SUB CODE: GC, OP

NO REF SOV: 004 OTHER: 000

Card 2/2

AUTHOR: Yelyutin, V. P., Gavrov, Yu. A., Glukhovtsev, N. V.

TITLE: The Interaction Between Nickel-Vanadium Alloys and Refractories (Vzaimodeystviye nikelevanadiyevykh splavov s ogneuporami)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, No 6, Nr 1, pp 87-92 (USSR)

ABSTRACT: The present investigation was carried out to improve the technology of high-temperature alloys, essentially in regard to the removal of inclusions of non-metals or gases in alloys. Nickel-vanadium alloys were used as initial materials the melt of which was produced at 1 800 - 1 900°. The melt of the nickel-vanadium alloys was carried out in crucibles of Al_2O_3, BeO, ZrO_2 with different duration of storing. The analysis showed that the alloys were rich in gases such as 0,07% - 0,09% O_2 and 0,01 - 0,03% N_2. It was found that the high gas content of the alloys is caused by inclusion of the initial materials, especially the electrolytic thermic vanadium.

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The Interaction Between Nickel-Vanadium Alloys and Refractories

To determine the suitable refractory for the nickel-vanadium alloys the interaction between the alloys and the refractory was investigated. Vanadium is a comparatively active metal in the melt and reacts electrochemically with the refractories of the crucible, bringing impurities into the metal melts. In the reactions mainly VO reacts, on the interface between VO and the oxides of refractories also V_2O_5 is formed. The lower stability of ZrO_2 as compared to vanadium melts is probably a consequence of the reaction $2ZrO_2 + V \rightleftarrows ZrO_2 + VO$.

By means of radioactive indicators the character of the interaction between the refractory and the liquid metal alloy with a vanadium content of 40% was determined. ZrO_2 was used as refractory to which the radioactive isotope Zr^{95} was added. The investigations showed that non-metallic impurities can be avoided only if the melt is not overheated and is left in the state of melting for as short a period as possible. The reaction products were investigated also by means of x-ray structural analysis to explain the character of the inter-

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SOV/64-8-1-17/24

The Interaction Between Nickel-Vanadium Alloys and Refractories

tion between the refractory and the liquid nickel-vanadium alloys. This analysis showed that in the interaction between the alloys and the refractory ZrO_2 is reduced to Zr.

The character of the interaction between the alloys and the refractories of beryllium oxide was not explained by the x-ray structural analysis. Probably only little vanadium oxide is formed in the interaction; this vanadium oxide dissolves in the melt. Beryllium vapor is formed which also dissolves in the metal melt.
Experiments on the interaction of nickel-vanadium alloys and Al_2C_4 were also carried out.

The macro- and microscopic investigation of the surface of zirconium bricks showed that in the melting in zirconium crucibles in the case of a longer period of storage the metal melt penetrates the ZrO_2. In melting beryllium in beryllium oxide in crucibles the interaction between the liquid metal and the refractory is much smaller.
There are 1 figure and 1 reference.

Card 2/4

The Interaction Between Nickel-Vanadium Alloys and Refractor

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: October 1, 1957

Card 4/4

[illegible]

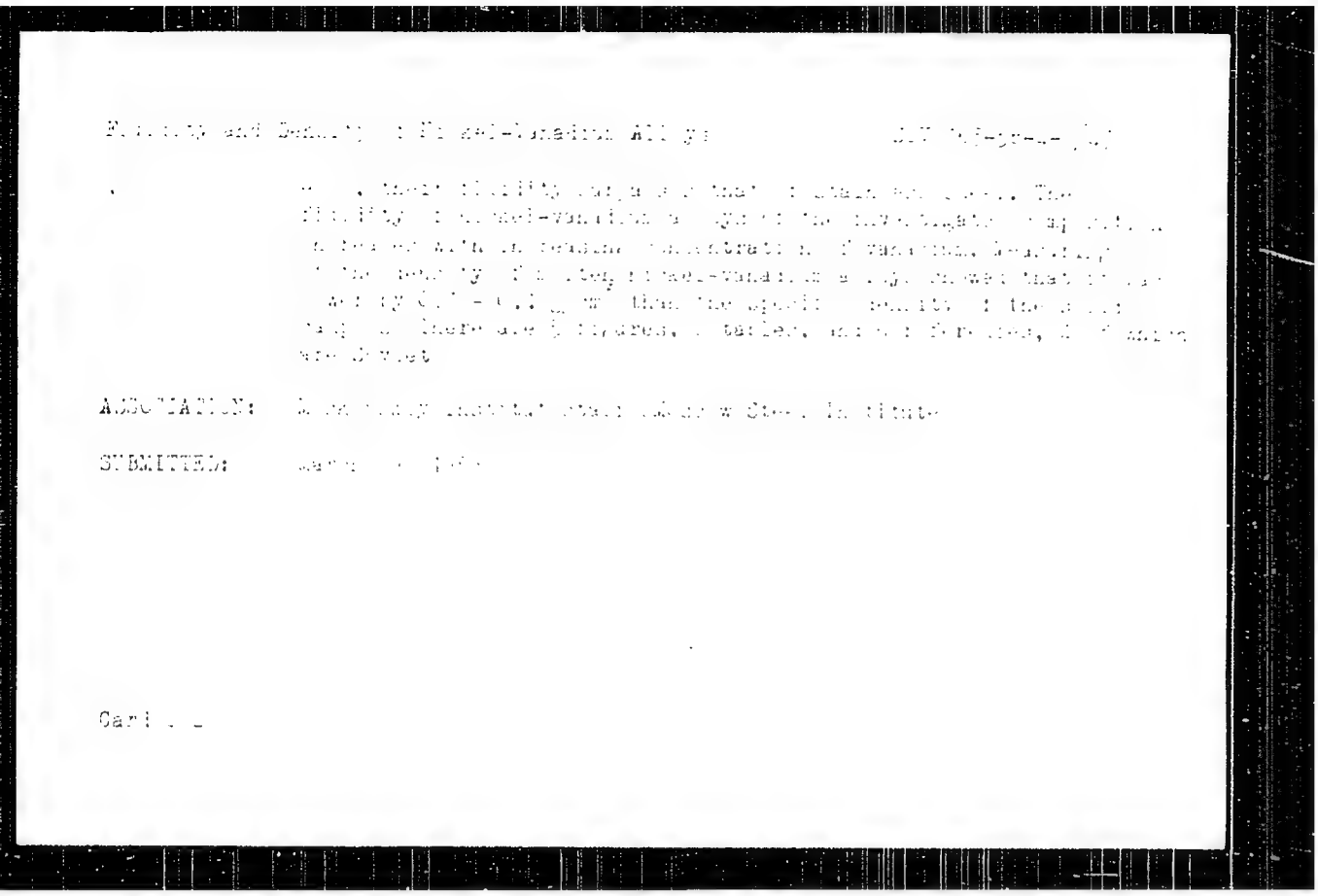
AUTHORS: [illegible] [illegible]-59-2-[illegible]
[illegible] V.

TITLE: [illegible] and Density of [illegible]-Vanadium Alloys
([illegible] splavov nikelya s vanadiyem)

PERIODICAL: [illegible] metallurgiya, [illegible], Nr [illegible],
pp [illegible] (USSR)

ABSTRACT: In order to determine the fluidity of nickel-vanadium alloys of a content of 25, 50, and 75 % of vanadium, the method of pouring the alloys into molds of the [illegible]-type was chosen. By this method, the tests can be carried out in vacuum or in a neutral atmosphere. The metal was melted in crucibles of beryllium-oxide with argon in a high-temperature resistance furnace with a graphitic carbon heater. A special furnace structure as shown here allowed the metal to be poured into [illegible] without disturbing the tightness of the furnace. The experimental method of [illegible] and [illegible] (Ref 6) was employed to determine the specific gravity of the melt. This [illegible] method is rather [illegible] - By investigating the fluidity of the [illegible] alloys of a vanadium content of 25, 50, and 75 % it was found that these alloys showed a rather good fluidity;

Card 1/[illegible]



ASSOCIATION:

SUBMITTED:

Carl

The method of studying of hands for detection of Escherichia coli B. V. Glukhovtzev and A. D. Zorrag. *Voprosy Pitaniya* 4, No. 6, 110-115(1935). Various food and other tests are discussed. J. H. Rathbun

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

USSR /Microbiology. Medical and Veterinary Microbiology. F-6

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35793

Author : Glukhovtsev, B.V.

Title : Yeast-like Fungi and Their Role in the Spread of Some Bacterial Infections

Orig Pub: V sb.: Eksperim. i klinich. issledovaniia II, L, Medgiz, 1956, 332-333

Abstract: No abstract.

Card 1/1

USSR /Microbiology. Medical and Veterinary Microbiology. F-6

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35785

Author : Glukhovtsev, B.V.; Kurushina, T.M.; Maslova, G.V.

Title : Characteristics of the Yeast Flora in Various Skin Infections

Orig Pub: V. sb: Eksperim. i klinich. issledovaniia II, L., Medgiz, 1956, 335-336

Abstract: 6232 examinations of persons sick with various forms of skin diseases were conducted. In 306 cases various yeasts, primarily C.albicans (113 cases), and other representatives of the genus Candida (76 cases) were isolated. In 19% of the positive cases fungi of the specie Trichosporon were isolated. A supposition is expressed about the identity of Trichosporon and Geotrichoides.

Card 1/1

USSR /Microbiology. Medical and Veterinary Microbiology.

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35790

Author : Glukhovtsev, B.V.

Title : The Transmission of the Yeastlike Fungi of the Genus Candida

Orig Pub: V sb.: Eksperim. i klinich. issledovaniia II, L, Medgiz, 1956, 339-340

Abstract: In experimentally infected guinea pigs and rabbits, yeast-like fungi were isolated from the internal organs of outwardly healthy animals. Mycosis-bearing was studied in people. Representatives of the Genus Candida were isolated from the mouth cavity in 32.5% of the examined school children, from the genitalia of 28% of the women, from the organs of persons who had died from

Card 1/2

USSR /Microbiology. Medical and Veterinary F-6
Microbiology.

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35729

tuberculosis (in 40% with the hematogenic-disseminating form and 53% in the fibro-cavernous form), in the saliva of persons sick with tuberculosis, and in the contents of the stomach, taken on an empty stomach from persons sick with stomach-intestinal diseases.

Card 2/2

KASHKIN, P.N., GLUKHOVTSEV, B.V., KONDRAT'YEVA, A.A., MERCHENKOVA, F.G.,

Some indications of authenticity of the candidial nature of complications in antibiotic therapy. Antibiotiki, 3 no.3:118-122 My-Je '58
(MIRA 11:7)

1. Leningradskiy nauchno-issledovatel'skiy institut antibiotikov.
(MONILIASIS, etio., & pathogen.
antibiotic ther., verification (Rus))
(ANTIBIOTICS, inj. effects,
moniliasis, verification (Rus))

GLUKHOVTSEV, B.V.; FROLOVA, M.A.

Microflora dynamics in candidiasis treated by antibiotics. Eksp. i klin. issl. po antibiot. 2:106-109 '60. (MIRA 15:5)
(MONILIASIS) (ANTIBIOTICS) (MEDICAL MICROBIOLOGY)

GLUKHOVTSEV, G. D.

PA 190T68

USSR/Medicine (Veterinary) - Infectious Diseases Mar 51

"Aluminum Hydroxide Formol Vaccine Against Swine Erysipelas," G. D. Glukhovtsev, Cand Vet Sci, State Sci Control Inst of Vet Prepns

"Veterinariya" Vol XXVIII, No 3, pp 47-52

Aluminum hydroxide formol vaccine against swine erysipelas established immunity for 6 mo, does not produce undesirable side effects, and remains suitable for use during 1 yr after prepn.

190T68

GLUKHOVTSEV, G.D., kandidat veterinarnykh nauk.

Methods of active prophylaxis of swine erysipelas. Trudy Gos. nauch.-kont.inst.vet.prep. 4:236-245 '53. (MLRA 7:10)
(Swine--Diseases) (Erysipelas--Preventive inoculation)

USSR / Microbiology. Microbes, Pathogenic to Man and Animals. General Problems.

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19537

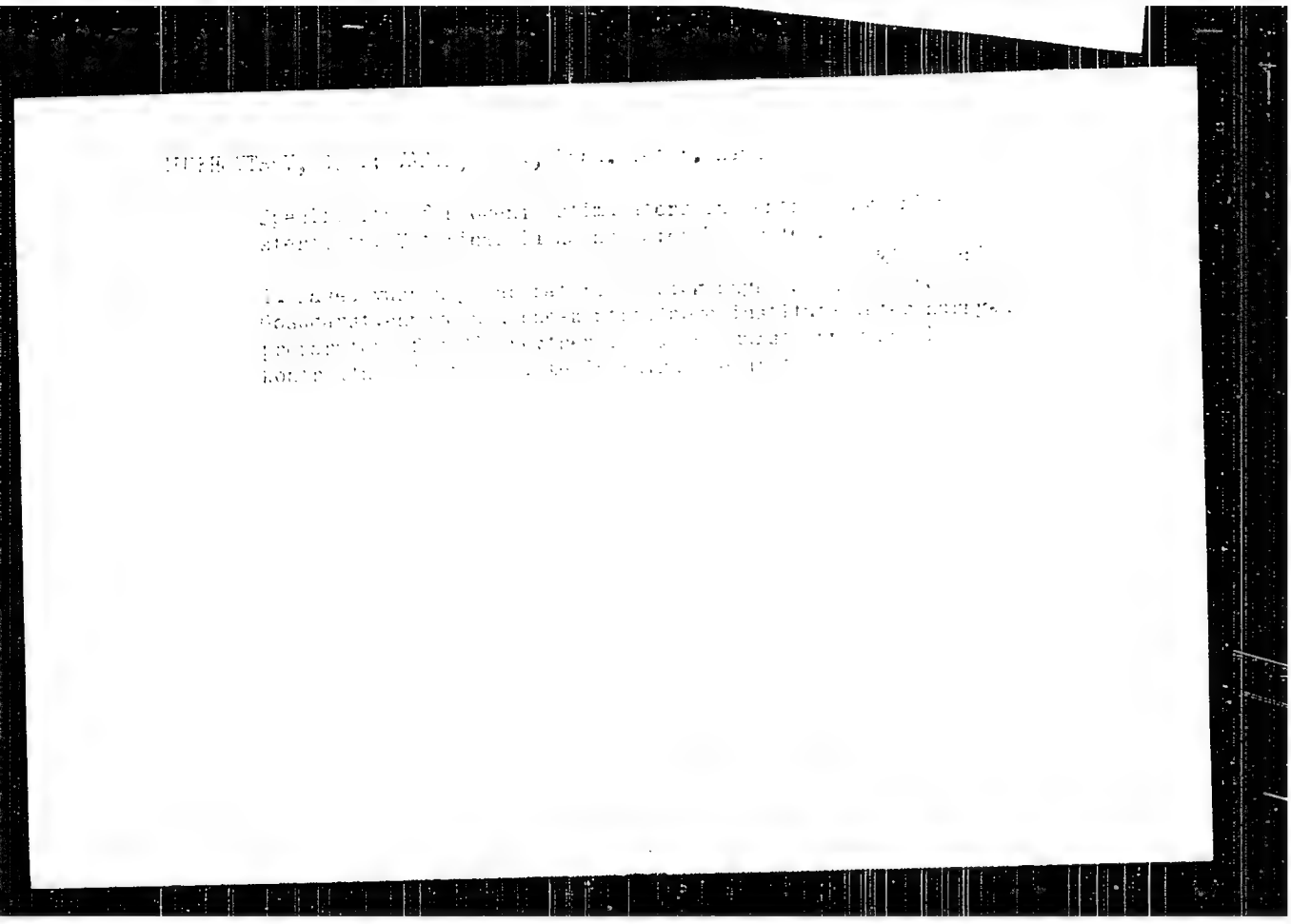
Author : Glukhovtsev, G. D.
Inst : State Scientific-Control Institute of Veterinary Preparations

Title : Serological Standardization of Erysipelas Strains in Swine

Orig Pub : Tr. Gos. nauchno-kontrol'n. in-ta vet. preparatov, 1957, 7, 230-236

Abstract : To select immunogenic strains, the author applied the hemagglutination reaction (HAR). It was demonstrated that strains, producing HAR in dilutions of 1 : 32, 1 : 64 and higher, possess immunogenic properties. Standard agglutinating sera were obtained by

Card 1/2



GLUKHOVTSEV, L.V.; ZAKHAROVA, S.V.

Preparation of furan dialdehydes. Izv.AN SSSR.Ser.khim. no.2: 390-391 F '64. (MIRA 17:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

GLUKHOVTSEV, S.; ZAKHAROV, S., inzh.

Homemade flotilla. Tekh.mol. 28 no.10:16 '60. (MIRA 13:10)

1. Nachal'nik TSentral'noy morskoy model'noy laboratorii Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Glukhovtsev).
(Ship models)

GLUKHOVTSEV, S., sud'ya respublikanskoy katerorii sorevnovaniy

Starting and controlling models. Voen.znan. 37 no.6:30 Je '61.
(MIRA 14:6)

(Motorboats--Models)

GLUKHOVTSEV, S.A.; DERBEDENEV, G.A., redaktor; MUNTYAN, T.P., tekhnicheskiy redaktor

[The seaworthiness of a ship; aids for student organizations, All-Union Volunteer Society for Assistance to the Army, Air Force, and Navy groups and builders of ship models] Morskhodnaya kachestva korablia; posobie dlia uchebnykh organizatsee, kruzhkov Dosaaf i morskikh modelistov. Moskva, Izd-vo Dosaaf, 1954. 26 p. (MLRA 8:5)
(Ship models)

GLUKHOVTSEV, S.A.

3646. GLUKHOVTSEV, S.A. Morekhodnyye Kachestva Koraclya. Posobiye dlya uchec. organizatsiy, kruzhkov DUSAAF i morskikh modelistov. M., Izd-vo DOSAAF. 1954. 28s. s ill; 1L. chert. 20sm 5,000ekz. 1r. 15k.-(54-57997) P 629.12 (086.5) 629.12.07

SO: Knizhnaya Letopis', Vol. 3, 1955

GLUKHOVTSEV,S.

What to start with. Voen.znan.31 no.4:3 Ap '55. (MLRA 8:10)

1. Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR
(Ship models)

GLUKHOVTSEV, S., chlen zhyuri konkursa.

Competition for the best motors for ship models. Vsen.znan.31 no.7:11 Jl'55. (MLRA 8:12)
(Marine engines--Models)

GLUKHOVTSEV, S.

Advices to builders of ship models. Voen.znan. 31 [i.e. 32] no.4: 25 Ap '56. (MLRA 9:8)

1. Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Ship models)

GLUKHOVTSEV, S.

Wider road to the "little fleet." Voen.znan. 31 no.9:19 S '56.
(MLRA 9:11)

1. Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Ship models)

GLUKHOVTSEV, S.A.; IGOSHIN, M., redaktor; MUNTYAN, T.P., tekhnicheskiy redaktor

[Seagoing properties of vessels; handbook for educational organizations of associations of the All-Union Volunteer Society for Assistance to the Army, Air Force, and Navy and for naval modelmakers] Morekhodnye kachestva korablia; posobie dlia uchebnykh organizatsii, kruzhkov DOSAAF i morskikh modelistov. Moskva, Izd-vo DOSAAF, 1957. 28 p. (MLRA 10:10)
(Ships--Models)

GLUKHOVTSEV, S.

New competitionrules for model ship builders. Voen. znan. 33 no.3:31 Mr '57. (MLRA 10:6)

1. Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Ship models)

GLUKHOVTSEV, S.

Some results of model building contests. Voen. znan. 34 no.1:32 Ja '58. (MIRA 11:2)

(Ship models)

GLUKHOVTSEV, S.

Basin for model boat contests. Voen.znan. 34 no.3:31 Mr '58.
(MIRA 11:4)

1. Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Ship models)

GLUKHOVTSEV,S.

The new All-Union classification of ship models. Voen. znan. 35 no.7:34 Jl '59. (MIRA 12:12)

1.Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Ships--Models)

GLUKHOVTSEV, S., sud'ya respublikanskoy kategorii, glavnyy sud'ya vsesoyuznykh sorevnovaniy.

Contests among "model fleet" builders. Voen. znan. 35 no.10:36-37 O '59. (MIRA 12:12)

(Ships--Models)

VESELOVSKIY, A.I.; GLUKHOVTSEV, S.A.; ZAKHAROV, S.N.; KRIVONOSOV, L.M.; GRIGOR'YEVA, A.I., red.; KARYAKINA, M.S., tekhn.red.

[Ship models] Morskoi modelizm. Moskva, Izd-vo DOSAAF, 1960. 316 p. (MIRA 13:11)

(Ship models)

GLUKHOVTSEV, S.

Controlling a yacht model by radio. Voen. znan. 36 no.1:35 Ja '60.
(MIRA 12:12)

1.Nachal'nik TSentral'noy laboratorii morskogo modelizma Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Yachts and yachting--Models)

62 AKMOVT 32.V.G.

Reaction of unsaturated silicohydrocarbons with dialkyl dithiophosphoric acids. A. D. Petrov, V. F. Mironov, and V. G. Glukhovtsev (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R.). *Doklady Akad. Nauk S.S.S.R.* 93, 499–501(1953); cf. Mel'nikov and Shvetsova-Shilovskaya, *C.A.* 48, 550f.—Addn. of $(RO)_2PS_2H$ to vinyl- and allylsilanes was studied. The products are believed to have the following structures: $R_3SiCH_2CH_2P(S)(OR)_2$ and $R_3SiCH_2CHMeSP(S)(OR)_2$, for the vinyl and the allyl derivs., resp. The products are generally distillable in good vacuum at about 120–50°, but suffer decompn. at higher temps. The di- and tri-addn. products, formed from the corresponding unsatd. silanes cannot be distd. without decompn. It is noted that the products, in their stability, resemble the adducts of CNSH to the silanes, rather than those of the halogens. The prepn. is performed as follows. Heating 203 g. $Et_3SiCH_2CH_2Cl$ and 800 g. 20% KOH in EtOH in an autoclave 9 hrs. at 150–60° gave after dilu. 50% $Et_3SiCH{:}CH_2$, b_{744} 145.2–6.4°. The necessary allyl silanes were prepd. by the previously described method (Petrov, *et al.*, *C.A.* 47, 10471*f*); in each case the mixt. of allyl halide with the halosilane was added to 2-fold excess of Mg. The unsatd. silane (5–10% excess) was treated dropwise with $(RO)_2PS_2H$ keeping the temp. about 50°; after further heating 5–6 hrs. at 50° the products were distd. *in vacuo*. The undistillable products were purified by washing with alkali or by distn. of low b. materials. While the allylsilanes react exothermically, the vinyl analogs react slowly and without a heat effect. In the following examples the starting materials, % yield, formula of product, b./mm., $n^{20}D$, and d_{20} are given: $Me_3SiCH_2CH{:}CH_2$ (I), $(MeO)_2PS_2H$, 71.2, $C_7H_{17}PS_2SiO_2$, 118–17°/3, 1.5045, 1.0096; I, $(EtO)_2PS_2H$, 75, $C_{11}H_{25}PS_2SiO_2$, 94°/1, 1.4940, 1.0261; I, $(PrO)_2PS_2H$, 76.3, $C_{13}H_{29}S_2PSiO_2$, 124°/2.5, 1.4913, 1.0100; I, $(iso\text{-}PrO)_2PS_2H$, —, $C_{13}H_{29}PS_2SiO_2$, 119–21°/2.5, 1.4850, 0.9994; $H(SiCH_2CH{:}CH_2)_3$ (II), $(MeO)_2PS_2H$, 79, $C_{15}H_{31}PS_2SiO_2$, 130.5°/0.5, 1.4844, 1.0010; II, $(EtO)_2PS_2H$, 88, $C_{17}H_{35}PS_2SiO_2$, 134°/1, 1.4890, 1.0004; II, $(PrO)_2PS_2H$, 84.5, $C_{19}H_{39}PS_2SiO_2$, 130°/1, 1.4869, 1.0001; $PhMe_2SiCH_2CH{:}CH_2$, $(MeO)_2PS_2H$, 70, $C_{13}H_{21}PS_2SiO_2$, (MeO)$_2$PS$_2$H, 80, $C_{15}H_{25}PS_2SiO_2$, 125°/1, 1.5038, 1.0178; $PhMe_2SiCH_2CH{:}CH_2$, $(MeO)_2PS_2H$, 70, $C_{13}H_{21}PS_2SiO_2$, 120.5°/0.5, 1.5040, 1.0139; $Me(PhCH_2)SiCH_2CH{:}CH_2$, $(MeO)_2PS_2H$, —, $C_{14}H_{23}PS_2SiO_2$, 135°/1, 1.5160, 1.1201; $Me_2Si(CH_2CH{:}CH_2)_2$, $(MeO)_2PS_2H$, —, $C_{12}H_{24}PS_2SiO_2$, —, 1.5105, 1.1083; $Me_2Si(CH_2CH{:}CH_2)_2$, $(EtO)_2PS_2H$, 70, $C_{16}H_{32}PS_2SiO_2$, —, 1.5052, 1.1115; $Me_2Si(CH_2CH{:}CH_2)(II)$, $(MeO)_2PS_2H$, 80, $C_{16}H_{34}PS_3SiO_2$, —, 1.5201, 1.2233; II, $(EtO)_2PS_2H$, 91, $C_{20}H_{42}PS_3SiO_2$, —, 1.5110, 1.1135; $Et_3SiCH{:}CH_2$ (IV), $(MeO)_2PS_2H$, 78, $C_{11}H_{25}PS_2SiO_2$, 131°/0.5, 1.5102, 1.0577; IV, $(EtO)_2PS_2H$, 76, $C_{13}H_{29}PS_2SiO_2$, 139°/0.5, 1.5031, 1.0256. For calcd. mol. refraction, the value for the group $Si(CH_2CH)_3$ to $S_2P(O)_2$ was found to be 53.35 ml./mole; the increment per CH_2 group is 4.13.

G. M. Kosolapoff

GLUKHOVTSEV, V. G.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 40 - 26/27

Authors : Petrov, A. D.; Mironov, V. F.; and Glukhovtsev, V. G.

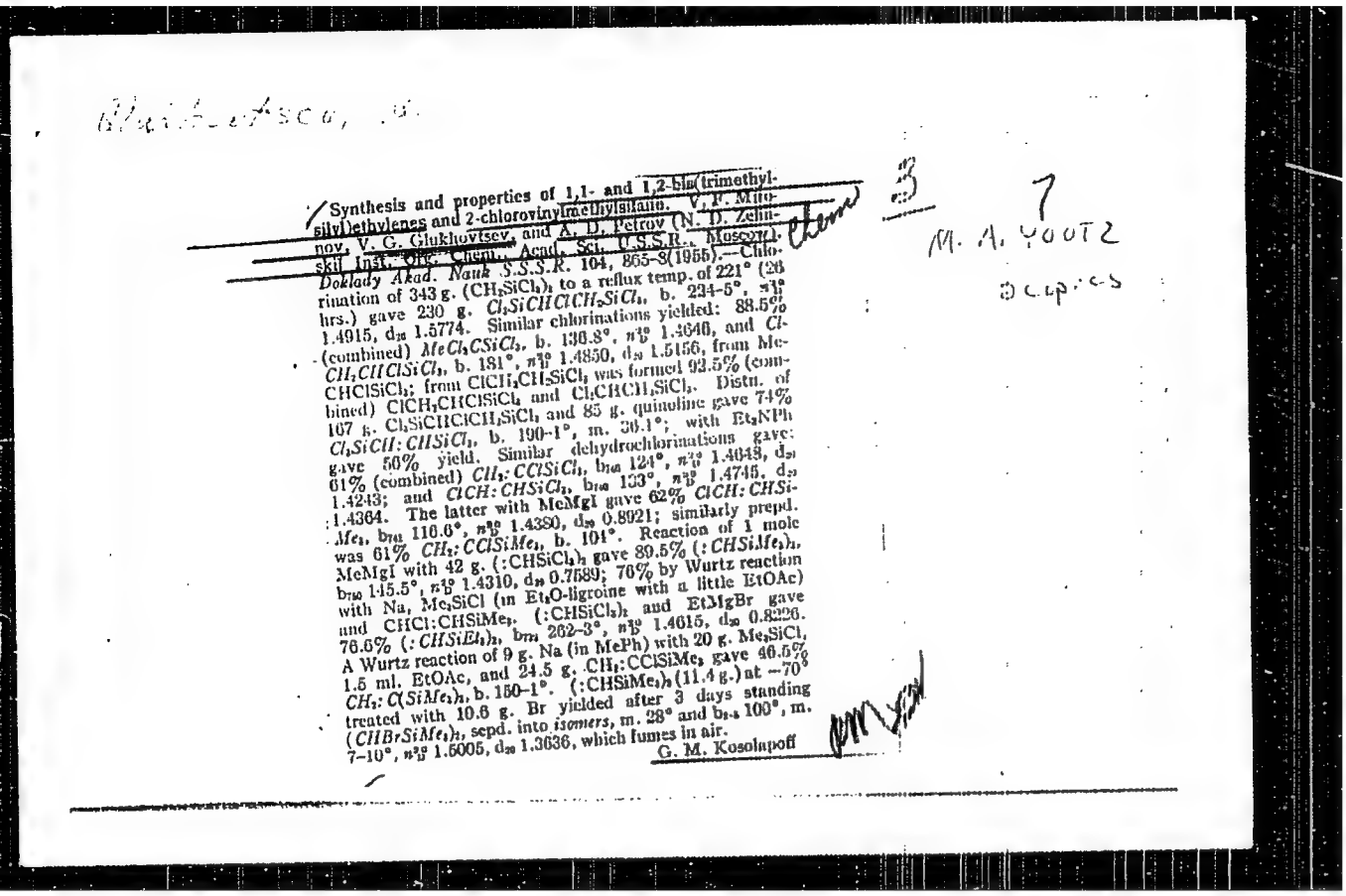
Title : The synthesis of diallyl silanes

Periodical : Izv. Ak SSSR. Otd. khim. nauk 6, 1123-1124, Nov-Dec 1954

Abstract : Data are presented regarding the synthesis of four new diallyl silanes including three with aryl radicals. The chemical characteristics of a hitherto unknown alpha-naphthylmethyldichlorosilane are described. Five references: 4 USSR and 1 USA (1949-1954). Table.

Institution : Acad. of Sc., USSR, The N. D. Zelinskiy Institute of Organ. Chemistry

Submitted : July 12, 1954



Synthesis and properties of 1,1- and 1,2-bis(trimethylsilyl)ethylenes and 2-chlorovinylmethylsilanes. V. F. Mironov, V. G. Glukhovtsev, and A. D. Petrov (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 104, 865–8(1955).—Chlorination of 343 g. $(CH_3SiCl_2)_2$ to a reflux temp. of 221° (26 hrs.) gave 230 g. $Cl_2SiCHClCH_2SiCl_3$, b. 234–5°, n_D^{20} 1.4915, d_{20} 1.5774. Similar chlorinations yielded: 88.5% (combined) $MeCl_2CSiCl_3$, b. 130.8°, n_D^{20} 1.4640, and $ClCH_2CHClSiCl_3$, b. 181°, n_D^{20} 1.4850, d_{20} 1.5156, from $MeCHClSiCl_2$; from $ClCH_2CH_2SiCl_3$ was formed 92.5% (combined) $ClCH_2CHClSiCl_3$ and $Cl_2CHCH_2SiCl_3$. Distn. of 107 g. $Cl_2SiClCHClCH_2SiCl_3$ and 85 g. quinoline gave 74% $Cl_2SiCH{:}CHSiCl_3$, b. 190–1°, m. 30.1°; with Et_3NPh gave 50% yield. Similar dehydrochlorinations gave: 61% (combined) $CH_2{:}CClSiCl_3$, b_{760} 124°, n_D^{20} 1.4643, d_{20} 1.4243; and $ClCH{:}CHSiCl_3$, b_{760} 133°, n_D^{20} 1.4745, d_{20} 1.4364. The latter with MeMgI gave 62% $ClCH{:}CHSiMe_3$, b_{760} 116.6°, n_D^{20} 1.4380, d_{20} 0.8921; similarly prepd. was 61% $CH_2{:}CClSiMe_3$, b. 101°. Reaction of 1 mole MeMgI with 42 g. $(:CHSiCl_3)_3$ gave 89.5% $(:CHSiMe_3)_3$, b_{760} 145.5°, n_D^{20} 1.4310, d_{20} 0.7589; 70% by Wurtz reaction with Na, Me_3SiCl (in Et_2O-ligroine with a little EtOAc) and CHCl:CHSiMe$_3$. $(:CHSiCl_3)_3$ and EtMgBr gave 76.6% $(:CHSiEt_3)_3$, b_{760} 262–3°, n_D^{20} 1.4615, d_{20} 0.8226. A Wurtz reaction of 9 g. Na (in MePh) with 20 g. Me_3SiCl, 1.5 ml. EtOAc, and 24.5 g. $CH_2{:}CClSiMe_3$ gave 46.5% $CH_2{:}C(SiMe_3)_2$, b. 150–1°. $(:CHSiMe_3)_3$ (11.4 g.) at −70° treated with 10.6 g. Br yielded after 3 days standing $(ClBrSiMe_3)_2$, sepd. into *isomers*, m. 28° and $b_{8.5}$ 100°, m. 7–10°, n_D^{20} 1.5005, d_{20} 1.3636, which fumes in air.

G. M. Kosolapoff

GLUKHOVTSEV, V. G.

GLUKHOVTSEV, V. G. -- "The Synthesis and Properties of Unsaturated Silanes and Disilanes." Academy of Science USSR, Institute of Organic Chemistry imeni N. D. Zelinskiy, Moscow, 1950. (Dissertation for the Degree of Candidate of Chemical Sciences)

So: Knizhnaya Letopis' No 44, October 1950, Moscow

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No [illegible], 1957, [illegible]

Author: Petrov, A. D., Mironov, V. F., and Glukhovtsev, V. G.

Institution: Academy of Sciences USSR

Title: Wurtz-type Synthesis of Organosilicon Compounds with a Double Bond in the α-Position

Original Periodical: Izv. AN SSSR, Section on Chemical Sciences, 1956, No 4, 461—466

Abstract: The condensation of trialkylchlorosilanes with derivatives of $CH_2 = CHCl$ (I) with the aid of Na and in the presence of ethyl acetate gives high yields of organosilicone compounds with α-positioned double bonds. The condensation of $SiCl_4$ (II) with I under such conditions yields $(CH_2 = CH)_4Si$ (III), while $(CH_3)_2C = CHBr$ (IV) and CH_3CHBr (V) condensed with $ClSi(CH_3)_2C_2H_5$ (VI) yield $(CH_3)_2C = CHSi(CH_3)_2C_2H_5$ (VII) and $CH_3CH = CHSi(CH_3)_2C_2H_5$ (VIII). Reaction of $(CH_3)_3SiCH = CHCl$ (IX) and $(CH_3)_3SiCl = CH_2$ (X) with $ClSiR_3$ (XI), where $R = CH_3$, yields $[(CH_3)_3SiCH =]_2$ (XII) and $[(CH_3)_3Si]_2C = CH_2$ (XIII). Condensation of

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USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No , , [illegible]

Abstract: $CH_3CCl = CHCH_2OH$ (XIV) with XI in the presence of pyridine yields $CH_3CCl = CHCH_2OSiR_3$ (XV) which, when reacted with XI in the presence of Na, forms $R_3SiC(CH_3) = CHCH_2OSiR_3$ (XVI); XVI can be hydrolyzed to $R_3SiC(CH_3) = CHCH_2OH$ (XVII). The latter reacts with $CH_2 = CHCN$ (XVIII) to give $R_3SiC(CH_3) = CHCH_2OCH_2CH_2CHCN$ (XIX). The $CH_2 = CH$- group in III does not show activation with MR. The characteristic frequency of $CH_2 = CH$- in the spectra of III and $(C_2H_5)_3SiCH = CH_2$ is 1,2[illegible], 1,6[illegible], 1,9[illegible], and 3,054 cm^{-1}. To 1[illegible] gms of dispersed Na in 300 ml of ether and 250 gms of II are added 3-5 ml ethyl acetate; a stream of I is passed through the boiling ether for [illegible] hours. The yield of III is 85%, bp 1[illegible]/740.1 mm, n_D^{20} 1.4685, d_4^{20} 0.7899. The chlorination of 2 kg of $(C_2H_5)_3SiCl_3$ gives a conversion of 93% to a mixture of $ClCH_2CH_2SiCl_3$ (XX), bp 151.7°/751 mm, n_D^{20} 1.4652, d_4^{20} 1.4239, and $CH_3CHClSiCl_3$ (XXI), bp 136.5°/740.5 mm, n_D^{20} 1.4845, d_4^{20} 1.3912, in the ratio 1:1.5. The chlorination of XXI at 125° gives an 89% conversion to a 1:0.6 mixture of $CH_3CCl_2SiCl_3$ and $CH_2ClCHClSiCl_3$ (XXII) (bp [illegible]°/[illegible] mm, n_D^{20} 1.[illegible], d_4^{20} 1.[illegible]). The chlorination of XX at 140° results in a 93% conversion to a not easily separable mixture of XXII and $CH_2ClCH_2SiCl_3$ (XXIII); the

Card 2/5

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No [illegible]

Abstract: mixture boils at [illegible]. From $(Cl_3Si)_2CHCH_3$ it is possible to obtain $(Cl_3Si)_2$[illegible] in yields of [illegible], bp [illegible]/741 mm, n_D^{20} [illegible], d_4^{20} 1.[illegible]; when HCl is split off, $(Cl_3Si)_2C = CH_2$ is formed, bp 19[illegible]-20[illegible]/[illegible] mm, n_D^{20} [illegible]. When HCl is evolved in the presence of dimethyl aniline from a mixture of XXII and XXIII, a [illegible] conversion to $Cl_3SiCH = CH_2$ (XXIV), [illegible]/[illegible] mm, n_D^{20} 1.4745, d_4^{20} 1.435[illegible], and $Cl_3SiCH = CH_2$ (XXV), bp [illegible] mm, n_D^{20} [illegible], d_4^{20} [illegible], is obtained; the ratio of the products is [illegible].3. From [illegible] gms of XXV and CH_3MgI (45 gms Mg, 350 gms CH_3I, in 0.5 l ether, refluxing for 5 hours) X is prepared in yields of [illegible], bp [illegible]; by the same method, [illegible] = $CCl(C_2H_5)_3$ is prepared from XXV and C_2H_5MgBr, yield 76.5%, bp [illegible]/739 mm, n_D^{20} [illegible], d_4^{20} 0.[illegible]. Reaction of XXIV with CH_3MgI gives IX, yield [illegible], bp [illegible].6°/741 mm, n_D^{20} 1.4350, d_4^{20} 0.8924. A dispersion of [illegible] gms Na in 0.5 l ether is prepared; 20 gms XI (R = CH_3), 1.2 ml X, and 1.2 ml of ethyl acetate are added. After the start of the reaction an additional 23.5 gms of X are added and the mixture refluxed 2.5 hours. The yield of III is 46.5%, bp 151.6°/726.5 mm, n_D^{20} [illegible], d_4^{20} [illegible]. From [illegible] gms Na, [illegible] gms XI (R = CH_3), and [illegible] gms IX, XII is prepared in yields of [illegible], bp [illegible]/[illegible] mm

Card 3/5

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-[illegible]

Abst Journal: Referat [illegible]

Abstract: n_D^{20} [illegible] are [illegible] gms Na, [illegible] gms VI, [illegible] milliliter ethyl acetate, and [illegible] gms IV, VII is prepared in yields of 51.1%, bp 139.5°/7[illegible] mm, n_D^{20} 1.4[illegible]61, d_4^{20} [illegible]; V and VI give VIII, yield 32.5%, [illegible]. When a mixture of 52 gms XI (R = [illegible]) and [illegible] gms XIV is refluxed for 4 hours, XV (R = CH_3) is obtained, yield [illegible], bp [illegible], n_D^{20} [illegible], d_4^{20} [illegible]. To a mixture of [illegible] gms VI (R = [illegible]), [illegible] pyridine, and [illegible] C_6H_6, [illegible] gms XII are added and the mixture allowed to stand for [illegible] hours. The yield of XV (R = [illegible]) is [illegible]%, bp [illegible]°/[illegible] mm, n_D^{20} 1.45[illegible], d_4^{20} [illegible]. [illegible] 26.5 gms XV are added over a period of [illegible] hours after the initiation of the reaction with ethyl acetate. After heating for [illegible] hours XVI (R = CH_3) is obtained, yield [illegible]%, bp [illegible]°/[illegible] mm, n_D^{20} [illegible]430[illegible], d_4^{20} 0.8309. XV (R = C_2H_5) and XI (R = C_2H_5) give XVI (R = C_2H_5), yield 52%, bp [illegible]°/2 mm, n_D^{20} 1.44[illegible], d_4^{20} 0.[illegible]16. When 16 gms of 16 (R = CH_3) in 20 ml alcohol are refluxed with 30 ml water and [illegible] drops HCl for [illegible] hours, XVII (R = CH_3) is obtained, yield [illegible]%, bp [illegible]°/2 mm, n_D^{20} 1.4550, d_4^{20} [illegible]. The hydrolysis of XVI (R = C_2H_5) yields XVII (R = C_2H_5), yield 5[illegible]%, bp [illegible]°/2 mm, n_D^{20} [illegible], d_4^{20} [illegible]

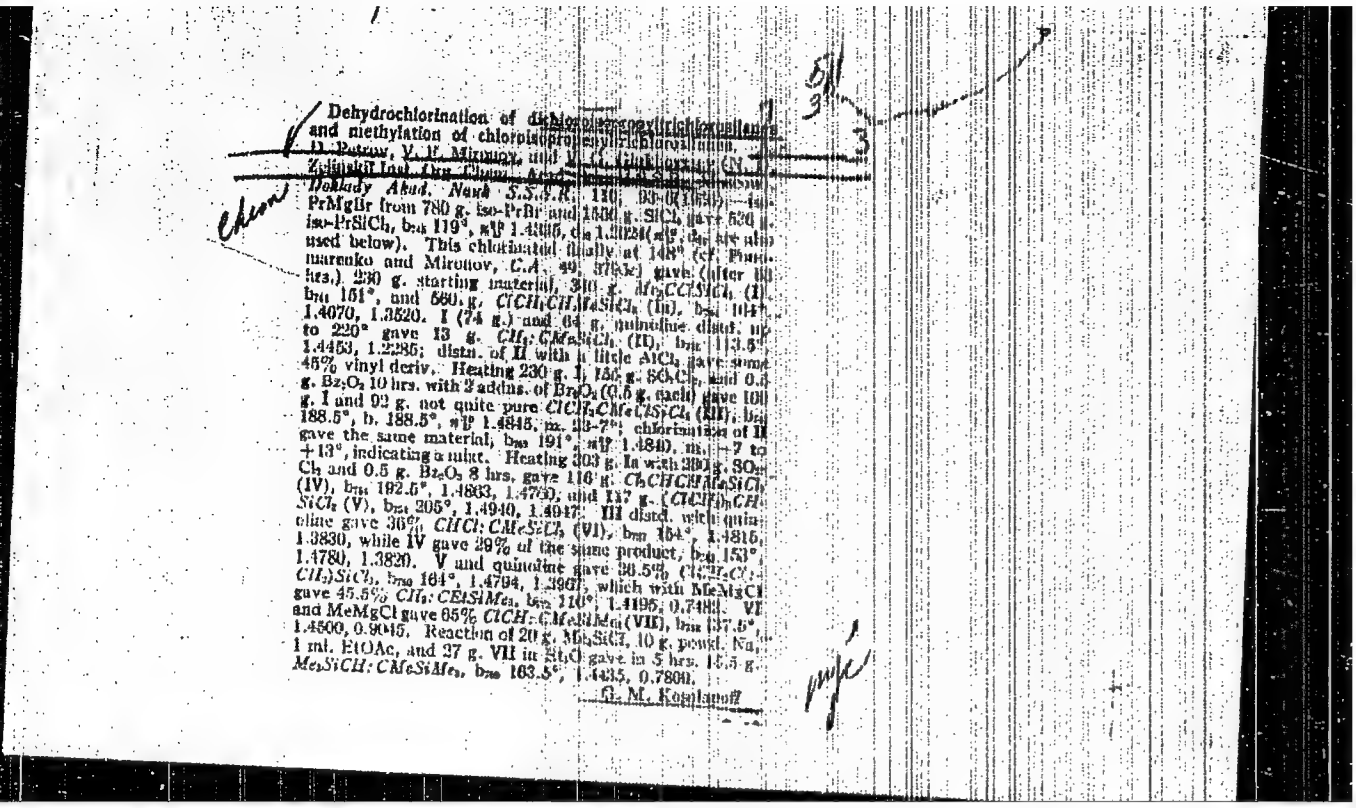
Card 4/5

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 348

Abstract: From XVII (R = CH_3) and XVIII, XIX (R = CH_3) can be prepared in the presence of CH_3ONa, yield 80%, bp 65°/6 mm, n_D^{20} 1.4610, d_4^{20} 0.9253. XVII (R = C_2H_5) and XVIII give XIX (R = C_2H_5), yield ~5%, bp 113°/2 mm, n_D^{20} 1.4732, d_4^{20} 0.9219.

Card 5/5



Dehydrochlorination of dichloroneopentylchlorosilanes and methylation of chloroisopropenylchlorosilanes.

A. D. Petrov, V. F. Mironov, and V. A. Ponomarenko (N. D. Zelinskiĭ Inst. Org. Chem., Acad. Sci. U.S.S.R.)

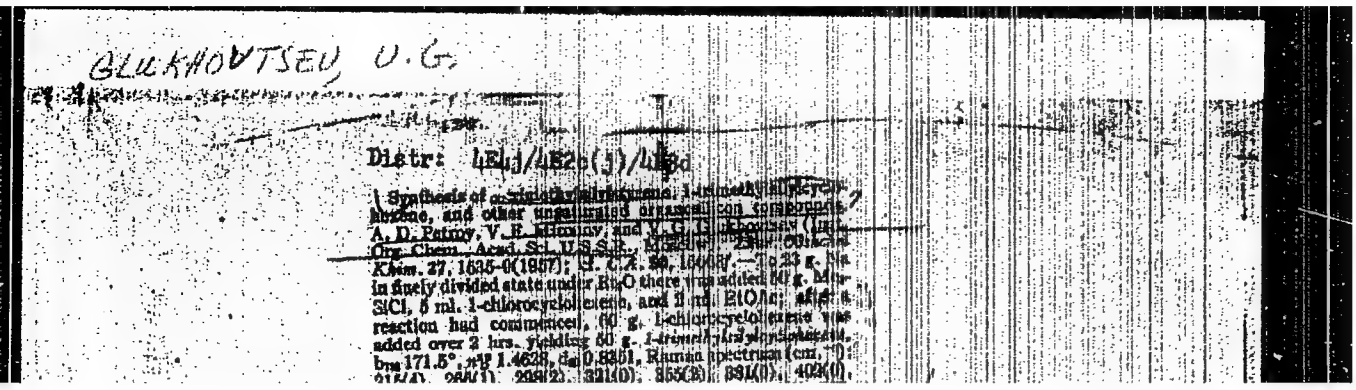
Doklady Akad. Nauk S.S.S.R. 130, 93–6(1959).—iso-PrMgBr from 780 g. iso-PrBr and 1450 g. $SiCl_4$ gave 520 g. iso-$PrSiCl_3$, b_{760} 119°, n_D^{20} 1.4385, d_4^{20} 1.1024 (n_D^{20}, b_{760}, and d_4^{20} are also used below). This chlorinated finally at 148° (cf. Ponomarenko and Mironov, *C.A.* 49, 3793c) gave (after 10 hrs.) 230 g. starting material, 310 g. $Me_2CClSiCl_3$ (I), b_{760} 151°, and 560 g. $ClCH_2CHMeSiCl_3$ (II), b_{760} 144°, n_D^{20} 1.4070, d_4^{20} 1.3520. I (74 g.) and 64 g. quinoline distd. up to 220° gave 13 g. $CH_2{:}CMeSiCl_3$ (III), b_{760} 113.5°, n_D^{20} 1.4453, d_4^{20} 1.2285; distn. of II with a little $AlCl_3$ gave some 45% vinyl deriv. Heating 230 g. I, 150 g. $SbCl_5$, and 0.5 g. Bz_2O_2 10 hrs. with 2 additns. of Bz_2O_2 (0.5 g. each) gave 100 g. I and 92 g. not quite pure $ClCH_2CMeClSiCl_3$ (XII), b_{760} 188.5°, b. 188.5°, n_D^{20} 1.4845, m. 23–7°; chlorination of II gave the same material, b_{760} 191°, n_D^{20} 1.4840, m. +7 to +13°, indicating a mixt. Heating 303 g. II with 300 g. SO_2Cl_2 and 0.5 g. Bz_2O_2 8 hrs. gave 116 g. $Cl_2CHCHMeSiCl_3$ (IV), b_{760} 182.5°, 1.4863, 1.4750, and 117 g. $(ClCH_2)_2CHSiCl_3$ (V), b_{760} 205°, 1.4940, 1.4947. III distd. with quinoline gave 36% $CHCl{:}CMeSiCl_3$ (VI), b_{760} 154°, 1.4816, 1.3830, while IV gave 29% of the same product, b_{760} 153°, 1.4780, 1.3820. V and quinoline gave 30.5% $(ClCH{:}C(Cl)CH_2)SiCl_3$, b_{760} 164°, 1.4794, 1.3967, which with MeMgCl gave 45.5% $CH_2{:}CClSiMe_3$, b_{760} 110°, 1.4195, 0.7481. VI and MeMgCl gave 65% $ClCH{:}CMeSiMe_3$ (VII), b_{760} 137.5°, 1.4500, 0.9045. Reaction of 20 g. Me_3SiCl, 10 g. powd. Na, 1 ml. EtOAc, and 37 g. VII in Et_2O gave in 5 hrs. 13.5 g. $Me_3SiCH{:}CMeSiMe_3$, b_{760} 163.5°, 1.4435, 0.7800.

G. M. Kosolapoff

PETROV, A.D.; MIRONOV, V.F.; GLUKHOVTSEV, V.G.; YEGOROV, Yu.P.

Synthesis and properties of some of the bis-(trimethylsilil) propylenes. Izv. AN SSSR. Otd. khim. nauk no.9:1091-1100 S '57. (MIRA 10:12)

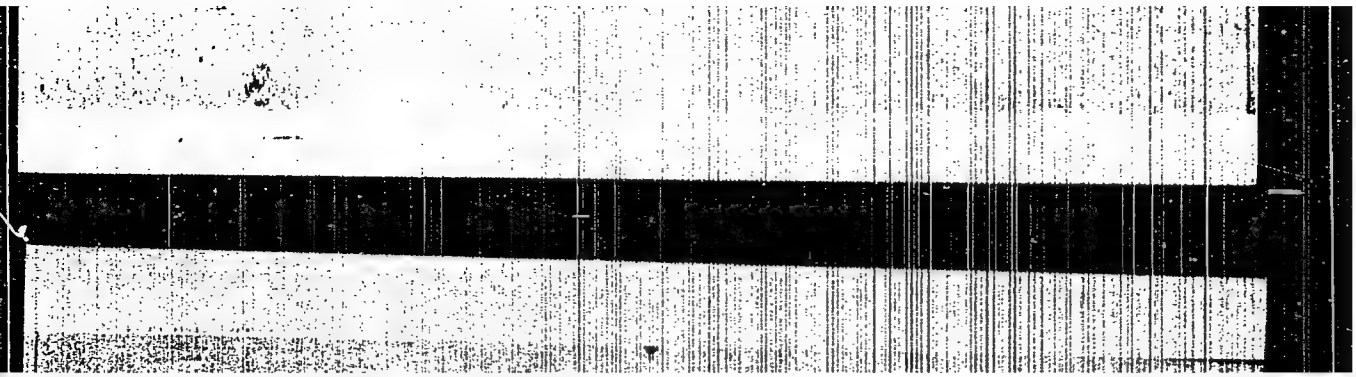
1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Propene)



BLUKHOVTSEV, V. G.

Distr: 4E4j/4E2c(j)/4k9d

Synthesis of [illegible] 1-trimethylsilylcyclohexene, and other unsaturated organosilicon compounds. A. D. Petrov, V. F. Mironov, and V. G. Glukhovtsev (Inst. Org. Chem., Acad. Sci. U.S.S.R.). Zhur. Obshchei Khim. 27, 1635-6(1957); C. C. A. 52, 1400f.—To 23 g. Na in finely divided state under Et_2O there was added 50 g. $MeSiCl_3$, 5 ml. 1-chlorocyclohexene, and 2 ml. EtONa; after the reaction had commenced, 60 g. 1-chlorocyclohexene was added over 2 hrs., yielding 50 g. 1-trimethylsilylcyclohexene, b_{760} 171.5°, n_D^{20} 1.4628, d_4^{20} 0.8351, Raman spectrum (cm.$^{-1}$): [illegible]



KORSHAK, V.V.; POLYAKOVA, A.M.; SAKHAROVA, A.A.; PETROV, A.D.; MIRONOV, V.F.; GLUKHOVTSEV, V.G.; NIKISHIN, G.I.

Polymerization of unsaturated silicon organic compounds under pressure. Part 4: Mono- and disilanes. Zhur. ob. khim. 27 no.9: 2445-2449 S '57. (MIRA 11:3)

1.Institut elementoorganicheskikh soyedineniy i Institut organicheskoy khimii AN SSSR.
(Silane) (Polymerization)

AUTHORS: Meshcheryakov, A. P., Shishkovtsev, V.G. 62-58-6-23/27

TITLE: The Synthesis of 1-Cyclopropyl-2-Cyclohexylcyclopropane (Sintez 1-tsiklopropil-2-tsiklogeksiltsiklopropana)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 6, pp. 700 - 701 (USSR)

ABSTRACT: In the present paper the authors describe a method of synthetization which they worked out for 1-cyclohexyl-2-cyclohexylcyclopropane. Besides, the authors tried to obtain 1-cyclopentyl-2-hexylcyclopropane from "enantovyy"aldehyde (?) and methylcyclopropylketone under the same conditions. Instead of an α-octenylcyclopropyl ketone, tetradecene-6-on-3 was, however, obtained. A new method of obtaining β-chlorine-2-pentanone from acetopropylalcohol and hydrochloric acid was worked out. The condensation of methylcyclopropylketone under the action of catalysts (alcoholic KOH, C_2H_5ONa, $Ba(OH)_2$, $Ba(OH)_2$,Na ,NaOH, KOH) was investigated. 2,3,5-tricyclopropyl-2,4 epoxyhexanone-5 was obtained. There are 7 references, 1 of which is Soviet.

Card 1/2

The Synt esis of 1-Cyclo,r.,yl-2-Cyclohexyle,clo,r.,ane SOV/61- 8-6-

ASSOCIATION: Institut or,anicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy, AS USSR)

SUBMITTED: January 21, 1958

1. Propanes--Synthesis 2. Ketones--Condensation 3. Alcohols --Chemical reactions 4. Hydrochloric acid--Chemical reactions 5. Catalysts--Performance

Card 2/2

5 (3)
AUTHORS: Meshcheryakov, A. P., Glukhovtsev, V. G. SOV/62-59-8-28/42

TITLE: Preparative Method for the Synthesis of Methylcyclopropylketone

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk. 1959, Nr 8, pp 1490-1492 (USSR)

ABSTRACT: First of all a survey of the development of the preparative method for the above mentioned compound is given and the following Soviet scientists are cited: Idz'kovskaya and Vagner (Ref 11), Dem'yanov and Pinegin (Ref 12), Rozanov (Ref 15), Slobodin and Shokhor (Ref 16), Zelinskiy and Den'gin (Ref 18), D'yakonov (Ref 19). Acetopropylchloride was synthesized as the initial product for the ensuing synthesis of methylcyclopropyl-ketone. In the course of this process the method used up to now could be improved so as to permit a yield of 76% instead of 64%. Methylcyclopropylketone was obtained from acetylchloride and caustic potash with a yield of 95% compared to the maximum yield of 76% which has so far been obtained. A description of the syntheses and the physical data of the materials obtained are given in the experimental part. There are 27 references, 11 of which are Soviet.

Card 1/2

Preparative Method for the Synthesis of Methyl-cyclopropylketone SOV/62-59-8-28/42

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences, USSR)

SUBMITTED: February 9, 1959

Card 2/2

-7088
307/[illegible]-12-32/43

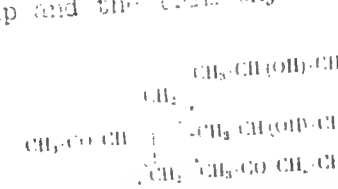
35.3400

AUTHORS: Freydlin, L. Kh., Meshcheryakov, A. P., Gorshkov, V. I., and Glukhovtsev, V. G.

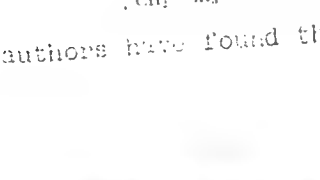
TITLE: Brief Communication. Selective Reduction of Methyl Cyclopropyl Ketone Over the Zinc Catalysts

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1957, Nr 12, pp 2937-2939 (USSR)

ABSTRACT: In catalytic reduction of methyl cyclopropyl ketone, two groups can be reduced: the carbonyl-group and the trimethylene ring:



(I)



(II)

(III)

The authors have found that Zn and Zn-Cu catalysts

Card 1/3

Brief Communication. Selective Reduction of Methyl Cyclopropyl Ketone Over the Zinc Catalysts

77088
SOV/62-59-12-32/43

(in the temperature interval 80-160° and 130 atm pressure) cause selective reduction of the carbonyl group, according to path (I) of the above equation, while Cu catalysts first cause (at 80°) hydrogenation of the trimethylene ring (path III). 2-Pentanol is formed above 125°. This behavior of methyl cyclopropyl ketone during catalytic reduction is similar to the reduction of α,β-unsaturated ketones (and aldehydes). There are 2 figures; 2 tables; and 10 references, 7 Soviet, 3 U.S. The U.S. references are: V. A. Slabey, P. H. Wise, J. Am. Chem. Soc., 71, 3252 (1949); R. V. Volkenburgh, K. W. Greenlee, J. M. Derfer, C. E. Boord, J. Am. Chem. Soc., 71, 3595 (1949); W. F. Bruce, G. Mueller, J. Selfter, J. L. Szabo, U. S. Pat. 2494084, Chem. Abstr., 45, 177 (1951).

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry of the Academy of Sciences, USSR (Institut organicheskoy

Card 2/3

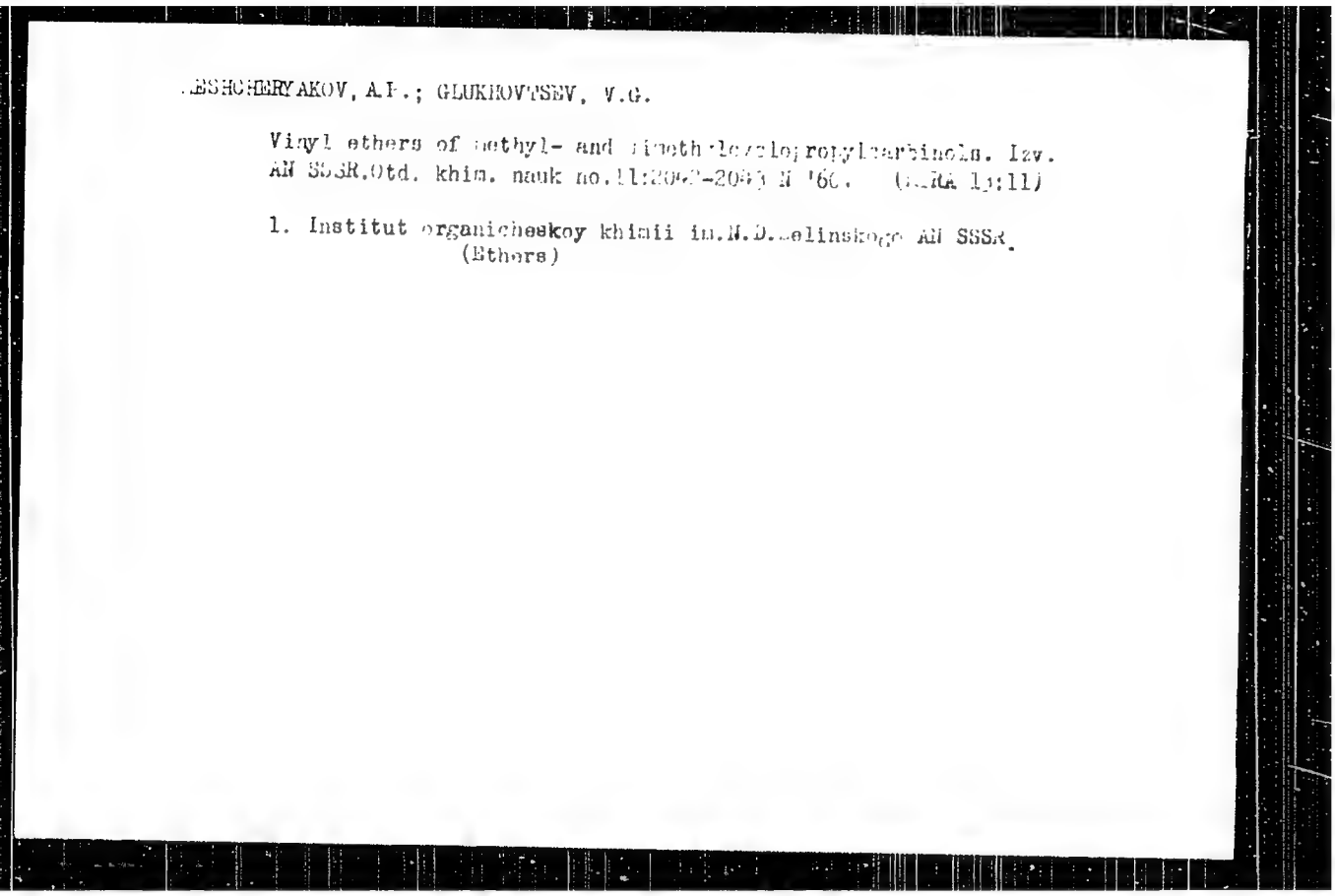
Brief Communication. Selective Reduction of Methyl Cyclopropyl Ketone Over the Zinc Catalysts

77088
SOV/62-59-12-38/43

khimii imeni N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: May 4, 1959

Card 3/3



ESHCHERYAKOV, A.F.; GLUKHOVTSEV, V.G.

Vinyl ethers of methyl- and dimethylcyclopropylcarbinols. Izv. AN SSSR.Otd. khim. nauk no.11:2082-2083 N '60. (MIRA 13:11)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
(Ethers)

NESMEYANOV, A.P.; PETROVA, L.V.; GLUKHOVTSEV, V.G.

Synthesis of di-, tri-, and tetrasubstituted cycloproplane hydrocarbons by the Kishner reaction. Izv. AN SSSR. Otd. khim. nauk no. 1:114-119 Ja '61. (MIRA 14:2)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Cyclopropane)

15 B102 2209

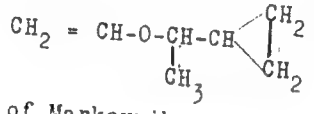
23591
S/062/61/000/005/008/009
B118/B220

AUTHORS: Shostakovskiy, M. F., Gracheva, Ye. P., Meshcheryakov, A. P., and Glukhovtsev, V. G.

TITLE: Polymerization of the vinyl ether of methyl cyclopropyl carbinol

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 5, 1961, 924 - 927

TEXT: In Ref. 1 (B. A. Zakharov et al., Dokl. AN SSSR, 122, no. 5, 814 (1958)), it has been stated that the double bond of the vinyl ethers has an increased nucleophilic character which manifests itself in various addition reactions, transformations, and especially in the polymerization reaction. For the study of the conditions of polymerization of the compounds $CH_2 = CHOR$ (I), the vinyl ether of methyl cyclopropyl carbinol is of special interest:



(II).

According to the rule of Markovnikov, the cyclopropyl group of this ether,

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B118/B220

as possible carrier of the propenyl group, is able to add various polar compounds. Moreover, this ether may be of interest as test substance for the synthesis of different polymers in the polymerization and copolymerization reactions. The present paper describes the polymerization of the vinyl ether of methyl cyclopropyl carbinol in the presence of the initiators $FeCl_3$ and azonitrile isobutyric acid under optimum conditions for the polymerization of the vinyl alkyl ethers. It has been found that compound (II) shows higher reactivity during polymerization in the presence of a 5 % solution of iron perchloride (in dioxane) than vinyl alkyl ethers (I) under the same conditions. First of all, this is evident from the fact that the polymerization of the ether (II) begins at 0°C and the highest yield in polymer is obtained at a temperature of -17 to -20°C whereas other vinyl alkyl ethers polymerize at boiling temperature only. The reason for such diverging temperatures of polymerization is the different stability of the ozonium complexes of these compounds (I, II):

(III) $CH_2 = CH\text{-}OR$ ⋮ $H(FeCl_3OH)$

$CH_2 = CH\text{-}O\text{-}\overset{CH_3}{\overset{|}{C}}H\text{-}CH\begin{matrix}\diagup CH_2 \\ \diagdown CH_2\end{matrix}$ ⋮ $H(FeCl_3OH)$ (IV)

Polymerization of the...

Evidently, complex (IV) is of lower stability; its decomposition is effected at a low temperature resulting also in the formation of a polymer at lower temperature. The use of azonitrile isobutyric acid as initiator instead of $FeCl_3$ did not give any results. There are 3 Soviet-bloc references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences USSR)

SUBMITTED: October 12, 1960

Card 3/3

MESHCHERYAKOV, A.P.; GLUKHOVTSEV, V.G.; LEMIN, N.N.

1-Cyclopropyl-2-α-furylcyclopropane and its transformations.
Izv.AN SSSR,Otd.khim.nauk no.10:1901-1903 O '61. (MIRA 14:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cyclopropane)

MESHCHERYAKOV, A.F.; OLUKHOVTSEV, V.G.

Preparation of 1-cyclopropyl-2-(butanone-1'-ol-4')cyclopropane.
Izv. AN SSSR Otd.khim.nauk no.12:2248-2250 D '61. (MIRA 14:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cyclopropane)

MESHCHERYAKOV, A.P.; GLUKHOVTSEV, V.G.

Synthesis of 1,3-dicyclopropyl-2-butanone-1. Izv. AN SSSR Otd. Khim.nauk no.1:176-178 Ja '62. (MIRA 15:1)

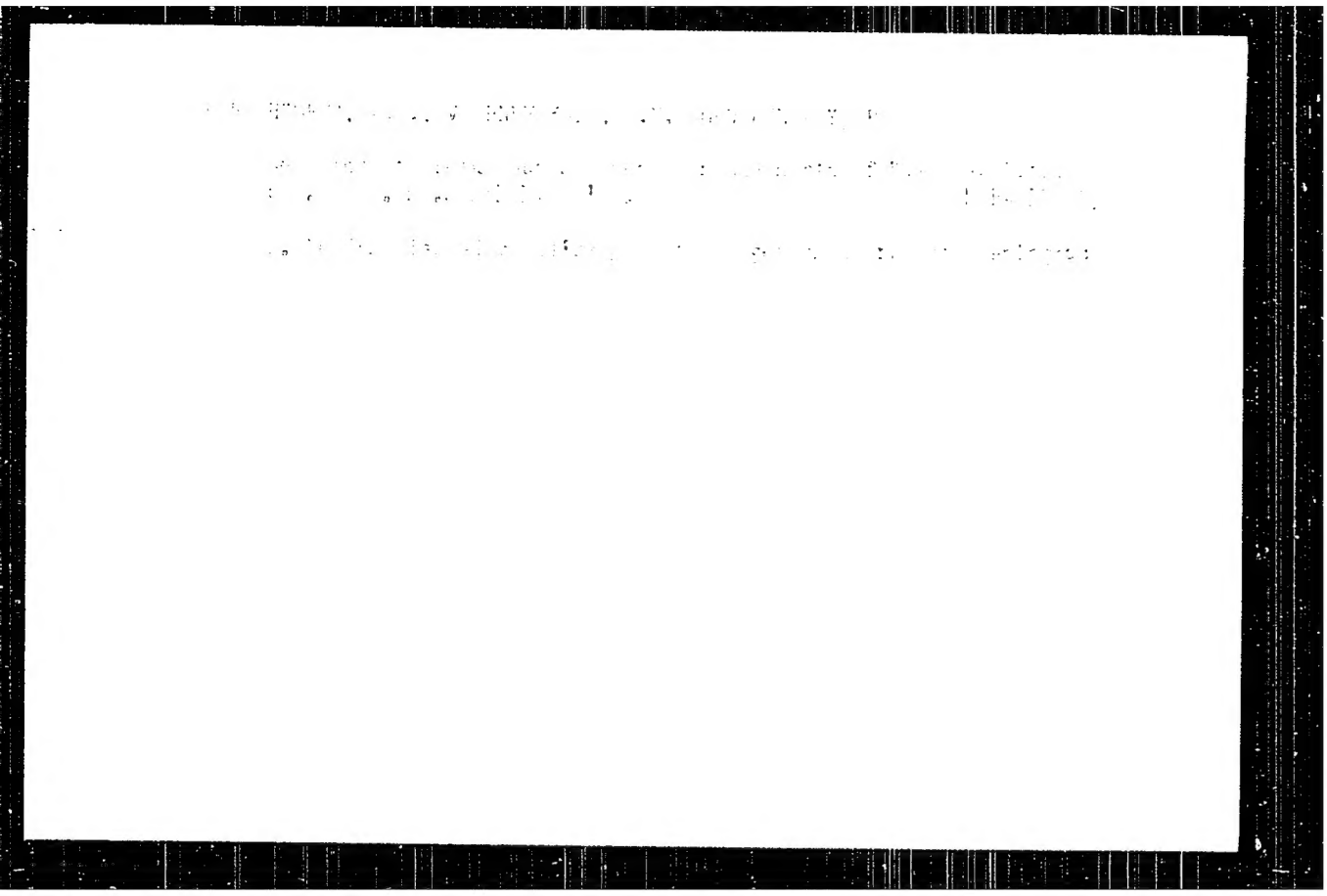
1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ketone) (Cyclopropane)

FERYDLIN, L.Kh.; SHAMF, V.Z.; ABIDOV, M.A.; GLUKHOVTSEV, V.G.

Dehydration of methylcyclopropylcarbinol in the presence of acid catalysts. Izv. AN SSSR.Otd.khim.nauk no.10:1843-1849 O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

(Methanol) (Dehydration (Chemistry)) (Catalysts)



S/062/63/000/003/009/018
B101/B186

AUTHORS: Shuykin, N. I., Petrov, A. D., Glukhovtsev, V. G, and Karakhanov, R. A.

TITLE: Transformations of the 1-methyl-2-α-furyl cyclopropane and 1-cyclopropyl-2-α-furyl cyclopropane on catalytic hydrogenation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 3, 1963, 521 - 524

TEXT: Hydrogenation of the 1-methyl-2-α-furyl cyclopropane gave rise to 2-n-butyl and that of the 1-cyclopropyl-2-α-furyl cyclopropane with a palladium-carbon catalyst (15 % Pd) at 300°C produced 2-n-hexyltetrahydrofuran, with a yield of about 95 %. The hydrogenation of the furan rings proceeds in these bicyclic or tricyclic systems just as easily as with the simplest alkyl derivatives of the furan. The cyclopropane ring is broken open by the addition of hydrogen. The ring cleavage takes place between the tertiary C atoms. Synthesis of the 1-methyl-2-α-furyl-cyclopropane, b.p. 143.5°C/759 mm Hg, n_D^{20} = 1.4735, d_4^{20} = 0.9499, by distillation of

Card 1/2

Transformations of the ...

the 3-methyl-5-α-furyl pyrazolin in the presence of dry KOH is suggested. The yield is 90 %.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 4, 1962

Card 2/2